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**The environmental system of Ariake Sound and its present situation**

Ariake Sound is one of the most important shallow water regions for fisheries in the western Japan. The large tidal range and strong tidal mixing of this sea, in combination with large freshwater discharge into the inner area, could play a crucial role in providing a variety of habitats like a tidal flat for coastal living resources and maintaining the environmental system as productive for fisheries. These features of this sea apparently contributed to prevention of red tide outbreaks and to rare incidence of oxygen depletion in the bottom water in the past. However, the situation has been rapidly changing in recent years. In this presentation, focusing on the recent environmental changes, I discuss the environmental system related to biological production of the Ariake Sound, and show how and in what direction it has changed. Future tasks will be also discussed.